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ABSTRACT

The study investigates the goals of arts education and measures the learning effects. Since the status of arts education is controversial, the question is, what does arts education provide for children? The report comprises four studies: (1) a review of the various conceptions of arts education advanced in literature; (2) interviews with teachers and policymakers in arts education to clarify their goals; (3) an empirical study of the learning experience of former students; and (4) an exploratory study, using "thinking aloud" protocols of students' problem solving in art subjects. The study showed that the main effect of secondary school students' taking art subjects is that they learn to participate in cultural activities and that these art subjects are useful for their future professional training and beneficial for their personal growth. There are several implications derived from this study. All outcomes of arts education can't be measured in objective ways. Also, there is a need to develop theoretical conceptions of the problem-solving process in the visual and other arts to improve the overall arts teaching. (NE)

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# ART, MUSIC AND CRAFTS IN SECONDARY EDUCATION: THEIR PURPOSE AND EFFECT

Invited paper presented at the INSEA Pre-conference,
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# ART, MUSIC AND CRAFTS IN SECONDARY EDUCATION: THEIR PURPOSE AND EFFECT

*Max van der Kamp, SCO, University of Amsterdam*

The status of Arts Education seems to be rather controversial. Some people, not only teachers of art, have an abiding belief in the benefits art activity have for children. Others tend to view the arts as a luxury, or as a pleasant, but useless pastime. However, in these times of budget cuts and accountability, more and more politicians, parents, journalists, students and decision makers are asking for justifications for what is taught in the schools. That is why the question is important: 'What is it that arts education provides to children?'. Many philosophers and pedagogists have tried to answer this question by speculation and contemplation; some of them made sense, others did not. I have tried to contribute to the discussion about arts education in an empirical way.

The setting of this study was the field of non-university preparatory secondary education in the Netherlands. In recent years so-called MAVO and HAVO students have voluntarily participated in experimental examinations in drawing and painting, textile crafts, music and handicraft. Each subject comprises a theoretical as well as a practical, skill component. The testing of the practical skills is left to the discretion of the individual school. The theoretical component is tested in nation-wide written examinations. For music these examinations comprise musicology, history of music and music appreciation. For the other subjects papers are set in art history and art appreciation.

The present study sets out to investigate the goals of arts education as well as the measurement of learning effects. Specifically, our project comprises four more or less distinct studies: (1) a review of the various conceptions of arts education advanced in the literature, (2) interviews with teachers and policy makers in arts education to clarify their goals, (3) an empirical study of the learning experiences of former students, (4) an exploratory study, using 'thinking-aloud' protocols, of students' problem solving in art subjects.

## THE GOALS OF ARTS EDUCATION

*in theory*

In the field of arts education there is little agreement on basic notions; research in this area enjoys little prestige among teachers; there is no well-developed research methodology, and there is no generally accepted body of theory. This vulnerable state-of-the-art could be caused by the peripheral position of the arts in the school, the interdependence of arts education and social-cultural changes and the absence of a scientific discipline of arts on university level in the Netherlands. Our first study revealed a wealth of conceptions of arts education, ranging from 'art for art's sake' to 'societal emancipation'. Most of these conceptions turned out to be rather vague and eclectic. Initially, the value of arts education was expressed in terms of nineteenth century canons of beauty. 'Right' standards of taste and judgement were to be taught. In the late forties and fifties our literature was dominated by the theme of 'art for creative self-expression'. In the after math of the war we were more alert to the dangers of authoritarianism and conformity. It was an appropriate time for concepts of freedom, self-expression, and creativity. Sir Herbert Read (1943) had great influence in the Netherlands and his ideas flourished in many 'centers for creativity' founded in those day's. In the schools, however, the concept of free expression gave place to the concept of guided expression (Van Gelder and Van Praag, 1969). Dutch drawing teachers were also influenced by fenomenological writers and they explained the importance of arts education with the help of the philosophical works of Heidegger and Merleau-Ponty (Gerritse, et al. 1976). In the sixties the 'Frankfurter Schule' too finds its way to the Netherlands. The art journals became the battlefield of violent discussions about 'visual communication' and ideological issues (Möller, 1971, Giffhorn, 1972). Nowadays the different oriëntations in arts education contrast less sharply, and search for collaboration against the back-to-the-basics movement which is raising also in the Netherlands.

*in practice*

Our second study revealed that the goals of arts education in MAVO and HAVO schools converge towards the broad concept of 'personal growth'. Teachers interviewed by us seemed to be less interested into ideological issues than into the practical problems of curriculum development and examinations. Good material for lessons in art appreciation is lacking. The facilities for these particular subjects - e.g. classrooms suitable for music - should be improved. The coöperation of the schooladministration is sometimes poor. The group of students choosing art subjects is unrepresentative of the total school population. More girls than boys choose art subjects, generally for their intrinsic interests but also with a view to future professional training. Combinations of art subjects with such disciplines as mathematics, physics or commercial subjects are unattractive to the majority of students. One out of five students records having chosen an art subject as a soft option. Teachers in the visual arts criticize the nation-wide written examinations. They argue that these examinations capitalize knowledge of facts and do not adequately reflect their goals.

## THE OUTCOMES OF ARTS EDUCATION

*the coverage problem*

Evaluation of any program directed at changing human behavior presupposes a theory of goals and effects. Some new and challenging ideas for such a theory have been presented by De Groot (1974,1975,1979). A central notion in the theory of De Groot is the 'coverage problem', i.e. the question of whether the examination requirements (learning effects as measured) adequately reflect the goals of the program ( as intended). In many cases the evaluator cannot escape the feeling that he has not been able to pin down 'the real thing'. One obvious way of contributing to the solution of this ever recurring problem is that of rethinking the basic issue of what this 'real thing' really is. Or, to put it in De Groot's own words: 'in evaluation research a sufficient theory of expected

effects is needed, a theory of desired, and of undesired effects'. This consideration leads to the following question: How can we detect those possible effects, and list them more completely than we usually do in relying on our traditional measurements, observations and inferences?

Within the theoretical framework of human information processing De Groot argues that complex knowledge and skills to be learned are not 'behavior', but rather mental programs or dispositions stored in memory, to be used freely and consciously by the student. One conclusion of this postulate is that the learner himself is the expert concerning the learning effects the learner has learned. Consequently, if we want to detect learning effects, we must go to the learner and ask him with the right questions what he has learned.

De Groot introduces learner reports of the type 'I have learned that... (or how to...)'. Further he proposes a heuristic classification of learning effect sentences according to two dichotomies: (1) general rules versus particular cases, and (2) statements about the world versus statements about the self. I cannot enter now into details of De Groot's theory (more of this can be found in De Groot,1979 and in a more comprehensive review by Van der Kamp and Haanstra, 1977), but let's turn to the application of the learner report.

*the learner report*

As for the third study, shortly after their examinations 599 students filled out a questionnaire containing detailed instructions for the reporting of learning experiences. In the first part they were invited to write learning effect sentences corresponding to De Groot's classification. In the second part they were asked to rate 30-pre-structured learning effect statements based on a pilot study.

Both the learning effects sentences and the ratings of the pre-structured statements disclosed a wide variety of experiences. Most of these have to do with art in the stricter sense, whereas hardly any learning experiences concerning the societal context of art are reported. Again, few learning experiences regarding the self are found. The responses to the pre-structured statements point to musical education as paramount

among art subjects in promoting social skills. The test-retest reliability (7 months' interval) of the list of learning effect statements was satisfactory (r =.62).

In addition, a follow-up study was done after 2½ years on 102 former students who formed a fairly representative sample of the 599 students who had set examinations in art subjects. About half of these students had gone into teacher training or infant teacher training colleges and a majority of them reported that they found their experience in an art subject useful. Remarkably, the five students who had entered an academy of art expressed themselves as less satisfied with their secondary school exposure to art education. Other former students said their arts education had been particulary useful for their personal growth or as a hobby, whereas one out of seven of the total group reported that it had not been very beneficial to him or her.

*Some learning effects reported by students of drawing*
(Shortly after examinations)

I have learned that many trends in art are reactions on preceeding trends
I have learned that artists are nearly always influenced by their surroundings
I have learned that composition is very important in a painting
I have learned how to make an etching

I have learned that it is not true that perspective is always necessary in a drawing
I have learned that it is not true that certain colours always clash
I have learned that there even exists 'kinetic art'

I have learned that I am too critical of my own work
I have learned that I can't express myself in drawing and that I'm not really good at it
I have learned that I prefer modern architecture, because it is functional

I have learned that it is not true that all abstract art is rubbish to me
I have learned that it is not true that the teachers opinion about a drawing is always right, but that I can make a judgement myself
I have learned that I have much more fantasy than I had ever thought

(After 2½ years)

I have learned a lot from drawing, not so much about perspective or

how to draw person's figures, but about myself. Actually I choose drawing as a soft option for I did very bad in physics and by choosing drawing I was almost sure to get a higher mark. I have discovered what materials I like and dislike. Drawing gave me the opportunity to express my emotions. Before,when I was worried about something I could not talk about it. Yet, I had to get rid of my emotions. This succeeded extremely well by being engaged in drawing. Before,every abstract painting I thought ridiculous, because I didn't understand. By means of art history I've got more insight in it and now I am even going to appreciate it.

*the thinking-aloud method*

Thinking that arts and cognition have nothing to do with each other is a serious mistake. In 1934 John Dewey wrote...'the odd notion that an artist does not think and a scientific inquirer does nothing else is the result of converting a difference of tempo and emphasis into a difference in kind' (Dewey, 1934, p.15). Among the research investigating the relation between Arts and Cognition are many interesting works (Bahle, 1936, Gombrich, 1966, Getzels and Cziks zentmihalyi, 1976, Arnheim, 1969, and Vygotski, 1971). Of specific interest to us was the Harvard Project Zero, directed by Perkins and Gardner (1978) because their research into the artistic process relied upon subjects' reports of their thoughts while working on a task. In our fourth (and last), exploratory, study we also used the thinking-aloud method i.e. subjects were asked to think aloud as they attempted the task being investigated.

Many teachers in art appreciation courses train their students to use certain perceptual schemata or, in John Berger's term, 'ways of seeing'. One of our objectives was to find out whether students, when exposed to a painting or other work of art, actually use some version or other of the perceptual schemata they have been taught. The experimental setting involved a design whereby the students were given two reproductions of paintings by Seurat and Kirchner and invited to describe how they came to grips with the paintings in terms of composition, theme and function. The outcome was unequivocally clear: the students did not adhere to any particular schema or 'way of seeing'.

Another problem, involving improvisation in music, was again aimed at uncovering cognitive strategies. Seven students were asked to complete a musical phrase using their instruments. In the event they were required

not only to think aloud but also to note down the music as they went along. Apparently, this complication of the task affected their solutions. Analysis of the protocols revealed general rather than task-specific strategies.

The third problem-solving task involved the modeling in clay of a free composition on the set theme 'metamorphosis'. The protocols show that the outstanding elements in the problem solving strategy are the search for a central unifying idea and the interplay between the emerging composition and its original form in the student's mind

## DISCUSSION

We have seen that the main effect of secondary school students' taking art subjects is that they learn to participate in cultural activities (in the stricter sense), and that these art subjects are useful for their future professional training and beneficial for their personal growth. Unfortunately, the group of students choosing art subjects is unrepresentative of the total school population. Although we could discuss these findings and make suggestions for improved guidance and examinations (Van der Kamp, 1980), in the context of the theme of our meeting I had better finish with some remarks on the research methods used and their significance for evaluating arts education. What is the learner report worth? It might be premature to judge the worth of the learner report definitely. Although our psychometric findings are certainly not disappointing, there are still methodological problems. For instance how is the 'performance' on a learner report influenced by verbal ability? What about social desirability? The learner report cannot be used for selective evaluation purposes or as a substitute for the achievement test, but it seems worthwhile to elaborate the learner report for more explorative and heuristic aims. It has given us more insight into some important but often overlooked outcomes of arts education. Outcomes (e.g. self confidence) which are difficult to measure in a more objective way.

In general, for most students thinking aloud proved an easy technique to master. Experience showed there to be a strong 'warm-up' effect; sometimes starting off awkwardly, a student quickly would become accustomed to the procedure and absorbed in the task. Our findings correspond with the conclusion of Perkins and Gardner (1978) that there was no reason to believe that students, thought-processes were dramatically disrupted (Ericsson and Simon, 1980). The question is whether subjects would report their thought processes correctly. Again, no absolute answer is possible since there could not readily be any objective data against which to compare students reports of their own thought processes. Reports of thinking remain a rich source of information, information obtainable in no other way. Sound theoretical conceptions of the problem solving process in the visual and other arts need to be developed for a more fruitful use (i.e. data analysis) of this method. Then, we can get insight into the strategies of the students and their common errors, so that we in the long run may improve the teaching of arts.

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